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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,490	02/22/2002	Warren E. Cory	X-1054 US	3728

24309 7590 04/17/2007  
XILINX, INC  
ATTN: LEGAL DEPARTMENT  
2100 LOGIC DR  
SAN JOSE, CA 95124

EXAMINER
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AGHDAM, FRESHTEH N

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	Application No. 10/082,490	Applicant(s) CORY, WARREN E.	
	Examiner Freshteh N. Aghdam	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 and 13-20 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, and 11-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/26/2007 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-4, 9, and 11-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shida et al (US 6,014,406), further in view of Lundh et al (US 6,373,834) and Petersen et al (US 6,804,246).

As to claims 1-2 and 9, Shida teaches a communication network comprising a plurality of first level transceivers that perform channel bonding operations, each first level transceivers (Fig. 1, means 1a and 1b); and a second level transceiver that perform channel bonding operations, the second level transceiver being controlled by one of the plurality of first level transceivers (Fig. 1, means 2a and 3a-3d), wherein the second level transceivers comprise a controller for receiving a mode control signal (e.g. the mode is switched based on the receiving conditions/ mode control signal of the control frame; Abstract) designating the transceiver as a master transceiver or a slave transceiver (Col. 2, Lines 49-67; Col. 3, Lines 1-7). Shida is not explicit about a master transceiver that performs channel bonding operations for aligning data of a data stream transmitted in parallel by way of a plurality of data channels that controls the first level transceivers; and the master transceiver comprises a controller receiving a mode control signal designating the transceiver as a master transceiver or a slave transceiver.

Lundh, in the same field of endeavor, teaches a master transceiver (e.g. RNC; Fig. 1, means 30) that performs channel bonding operations for aligning data of a data stream on a plurality of data channels (means 30 and 64; Col. 7, Lines 30-49); a controller designating the transceiver as a master transceiver or a slave transceiver (Fig. 1; means 30 and 62) since RNC acts as a slave transceiver when communicating with the mobile switching center (MSC; Fig. 1, means 40); and also, the RNC acts as a master transceiver when communicating with the base stations (Fig. 1, means 22). One of ordinary skill in the art would recognize that in order for a communication device to switch between modes based on a condition, the condition should be detected and the

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switch has to be informed of the detected condition and consequently switching from one mode to another accordingly as it is evidenced by Shida above. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lundh with Shida in order to enabling macrodiversity, diversity combining or soft handover by adding middle nodes (i.e. base station(s)) between the RNC(s) and the mobile station(s), in which the base station(s) (first level slave transceivers) act as master transceivers when communicating with the second level slave transceiver(s) (mobile station(s)) and acts as a slave transceiver when communicating with the RNC(s) (master transceiver). Petersen, in the same field of endeavor, discloses a master transceiver that performs channel bonding operations for aligning data of a data stream transmitted in parallel by way of a plurality of data channels (Col. 9, Lines 1-21). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Petersen with Shida and Lundh in order to increase speed of data communication by transmitting a signal in parallel over plurality of channels.

As to claim 3, Shida further teaches that the master and the plurality of first level transceivers generate respective control signal(s) according to different cycles of a clock (Col. 2, Lines 21-25, 38-41, and 49-67; Col. 3, Lines 1-10).

As to claim 4, one of ordinary skill in the art would recognize that it is obvious for any transceivers to include at least one buffer for the channel bonding operations as it is evidenced by Lundh (Fig. 2 and 2A: Col. 8, Lines 6-39) in order to utilize a temporary storage location for data information being sent or received. Usually located between two different devices that have different abilities or speeds for handling the data.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lundh with Shida for the reason(s) stated above.

As to claim 11, Shida further teaches that the transceivers comprise a plurality of levels, where each slave transceiver comprises an input to receive a control signal from a previous level (Col. 2, Lines 21-25, 38-41, and 49-67; Col. 3, Lines 1-10).

As to claim 12, Shida further teaches that each slave transceiver is configured by mode control signal to receive a control signal from either a master transceiver or a slave transceiver (Abstract; Col. 2, Lines 21-25, 38-41, and 49-67; Col. 3, Lines 1-10).

#### ***Allowable Subject Matter***

Claims 5-8 and 13-20 are allowed. The following is an examiner's statement of reasons for allowance:

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is 571-272-6037. The examiner can normally be reached on 9:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**KEVIN BURD**  
**PRIMARY EXAMINER**

Freshteh Aghdam  
Examiner  
Art Unit 2611

April 5, 2007